REMARKS/ARGUMENTS

Claim Amendments

Claim 1 has been amended to refer to venting the aerator to atmosphere through a conduit and to remove the reference to wetting solids accumulated in the aerator. New claim 10 depends on claim 1 and states that water entering the aerator during step (b) of claim 1 wets solids accumulated in the aerator during step (a). Claims 8 and 9, formerly withdrawn, are now cancelled. Claims 1-3, 5-7 and 10 are now pending. The Applicants submit that all pending claims are supported by the application as originally filed.

Claim Rejections

Claims 1-3 and 5-7 were rejected as being obvious over any one of JP 7-185271, JP 8-323161 or Pedersen US '997 in view of either JP 58-141796 or JP 64-36099. The Applicants respectfully traverse this rejection and submit that the pending claims are allowable.

Regarding the primary references, JP 7-185271 and JP 8-323161, the Office Action states that the aerators therein are vented to atmosphere through the liquid above them. Claim 1, as amended, states that the aerators are vented through a conduit. Accordingly, the Applicants submit that these references do not provide the features of claim 1.

Regarding Pedersen US '997, the Office Action states that tank water would seep into the aerators during the air off portion of the aerator cleaning method. In Pedersen US '997 however, the air flow is added to a flow of permeate which continues flowing while the air is off (column 11, line 26). Accordingly, tank water cannot seep into the aerator during the air off portion of the cycle. Further, Pedersen US '997 does not disclose venting an aerator to the atmosphere through a conduit.

In summary, the Applicants submit that none of the primary references teach all limitations of claim 1, nor claims 2, 3, 5-7 or 10.

The secondary references, JP 58-141796 and JP 64-36099, also fail to disclose a process as claimed having a step of reducing the pressure in the aerator by venting the aerator to the atmosphere through a conduit such that water in the tank enters the aerator. In the Response to Arguments section, the Office Action states that the aerators vent to atmosphere through the liquid to admit water when the air feed is cut-off. However, this does not involve venting through a conduit, and so does not satisfy the claims. In the Detailed Action section, the Office Action refers to flushing a liquid from an aerator line through a pipe with a valve. However, this does not involve venting the aerator such that water in the tank enters the aerator, and so does not satisfy the claims. The Applicants submit, in summary, that neither of these cited aspects of the secondary references provide all elements of the claims.

The Office Action further states that inspection of the devices of the secondary references would occur frequently and regularly. The Applicants submit that frequent and regular inspections are not taught by these references. Further, the secondary references are fine bubble aerators used in an aeration tank. The references do not teach that these aerators foul in normal use, but rather that fouling might be caused by tank water that enters when the air supply is shut off for other reasons. Since the aerators appear to stay clean while in use, but are at risk of fouling when shut down, the Applicants submit that here is no teaching or disclosure of frequent or regular inspections in the secondary references.

Finally, the Office Action states that it would be obvious to combine the primary and secondary reference by modifying the aerator air line of one of the primary references to include a pipe extension and valve to flush the aerator between regular inspection periods. The Applicants submit that the Office Action does not provide a prima facie case for such a combination, and that such a combination would not produce the

claimed invention. For example, Pedersen '997 relates to a two-phase flow of air and water and so would not be suitable for a combination of pipes and valves as proposed in the Office Action. Of the remaining primary and secondary references, none describe a need for aerator flushing between inspection periods. Further, in the secondary references the air valve in the moisture flow pipe or drain pipe is controlled in part by the blower motor turning on and off whereas in the Japanese primary references the blower runs continuously. The Applicants also note that the Office Action proposes a combination towards an apparatus whereas the claims deal with a method. In particular, the Office Action does not propose a solution to issues of timing and control of the various valves, including the permeate valves since they are linked operationally to the aeration valves in the primary Japanese references. The Applicants submit that there is no obvious mode of operation consistent with the teaching of the references that would provide the claimed process, particularly step (b) of claim 1.

Regarding claim 10, paragraph 77 of the application describes how water may enter through the holes of a coarse bubble aerator even while air is blowing through the hole. With fine bubble aerators, it is possible to provide a sufficient flow rate of gas to prevent water entry. The secondary references are fine bubble aerators and do not teach a method to remove solids brought in by water creeping in through the air holes during aeration. Instead, the secondary references are concerned only with removing the water that may enter the aerators during a shut down. In this context, the secondary references teach the need to flush out water that might otherwise persist in low spots in the air lines after a shut down, before such water can dry out and release a solid dust, but do not teach any concern for getting solids out of the body of the aerator itself. For these reasons, in addition to the reasons given in relation to claim 1, the Applicants submit that claim 10 is allowable.

For the reasons above, the Applicants submit that the claims are allowable.

Respectfully submitted,

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